

yeik-contents into two masses, the smaller division being finely granular, whilst the larger mass was formed of moderate-sized corpuscles like those usually seen in the so-called mulberry-cleavage stage.

19. *STRONGYLUS TUBÆFORMIS*, Zeder. (Plate XXI.)

In the small collection of parasites presented to me many years ago by Mr. Caleb B. Rose, F.R.C.S., I only recently noticed a little nematoid which is clearly referable to this species. It was entangled amongst a number of characteristic examples of *Ascaris mystax* of the Cat, and had consequently been overlooked. Being a solitary male specimen (since added to the special series of Entozoa contained in the Museum of the Royal Veterinary College), I did not make a very full examination of the worm; but on referring to my notes made on the 3rd of December last, I find that I have remarked upon the great size of the bursa, the rays of which were very conspicuous. I did not uncoil the specimen (represented in the accompanying Plate exactly as it appeared under Ross's $\frac{1}{2}$ " objective), for fear of injuring it; but I judged the length to be about $\frac{5}{8}$ of an inch. As it is the only specimen that has come under my notice, I have figured it (fig. 20).

EXPLANATION OF PLATE XXI.

- Fig. 1. *Ascaris cornelyi*: head of female, magn. 20 diam.
 2. The same: tail of female, magn. 24 diam.
 3. The same: tail of male, magn. 25 diam.
 4. The same: tail of a rather smaller male.
 5. *Strongylus hemicolor*: male, magn. 30 diam.
 6. The same: section of surface, magn. 150 diam.
 7. The same: part of bursa, magn. 150 diam.
 8. The same: head of male, magn. 150 diam.
 9. The same: tail of female, magn. 30 diam.
 10. The same: three eggs, magn. 150 diam.
 11. *Spiroptera muriei*: head of male, magn. 30 diam.
 12. The same: tail of male, magn. 30 diam.
 13. The same: tail of female, magn. 30 diam.
 14. *Ascaris andersoni*: tail of male, magn. 25 diam.
 15. The same: tail of female, magn. 25 diam.
 16. *Oxyuris obesa*: head of female, magn. 23 diam.
 17. The same: tail of female, magn. 24 diam.
 18. The same: tail of another female.
 19. The same: egg, magn. 122 diam.
 20. *Strongylus tubæformis*: male, magn. 23 diam.

4. Supplementary Notes on *Cervus mesopotamicus*.

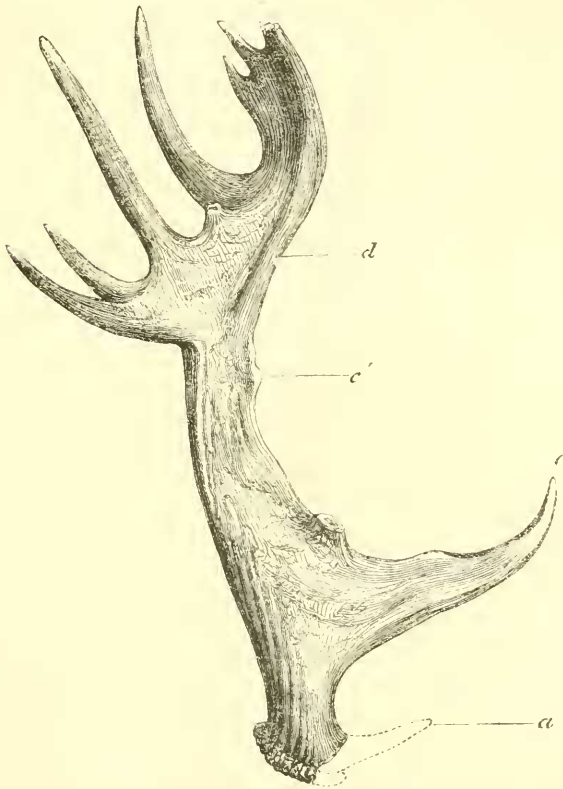
By SIR VICTOR BROOKE, Bart., F.Z.S.

[Received January 19, 1876.]

Having lately received from my indefatigable correspondent Mr. Robertson, H.B.M. Vice-Consul at Busrah, several fresh specimens of the horns of *Cervus mesopotamicus* (vide P. Z. S. 1875, p. 261, pl. 38), I hasten to lay before the Society some additional observations which these specimens have enabled me to make upon this interesting species.

The accompanying drawings, lettered according to the figures given in my original notice of the species (*l. c.* pp. 263 & 264, figs. 2 & 3) represent the left horns of four individuals; and all, with the exception of the largest (fig. 1), have been taken from the animals

Fig. 1.



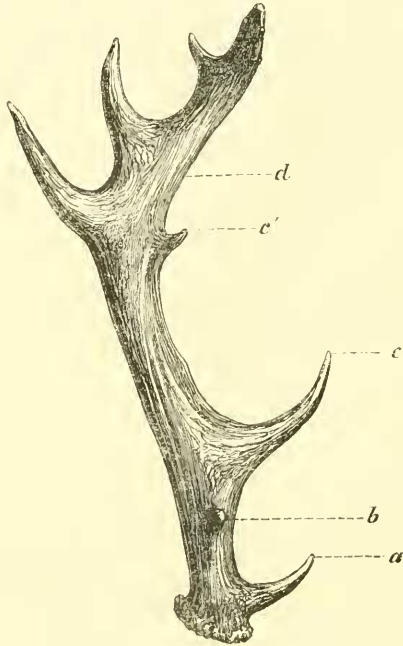
Left antler of *Cervus mesopotamicus* (remarkably largely developed).

after death. As compared with the single horn of the adult male (*l. c.* p. 264, fig. 3.) which formed the basis of my description of the fully grown horns of the species, the horns at present under consideration offer no very essential points of contrast, the characters presented by the new specimens in no way tending to render the anomalous form of horn described by me as characteristic of the species, less decided. There are, however, certain not entirely unimportant details in which the new specimens (consisting of single horns of six distinct males, in-

clusive of those figured) agree together, while they differ from the specimen first received; a slight modification of my original diagnosis appears to me to be therefore necessary.

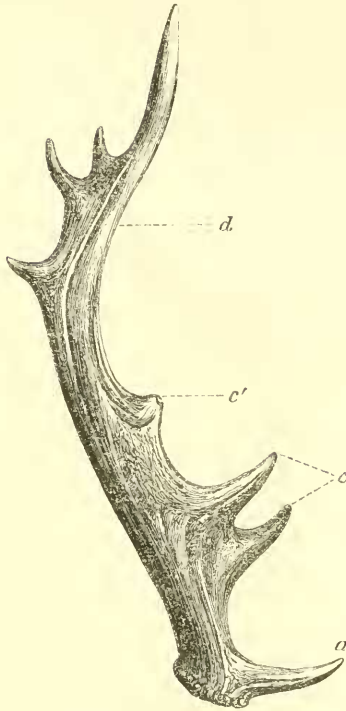
With one exception (fig. 2), in none of the horns lately sent by Mr. Robertson is the inner tine *b* (*l. c.* p. 264, fig. 3 *b*) developed, from which I am led to believe that this tine is of uncertain occur-

Fig. 2.

Left horn of *Cervus mesopotamicus* (about four years of age).

rence, and does not by any means constitute a fundamental specific character. Again, with but one exception (fig. 3 *c*), in none of the new specimens is the upper of the two tines (*l. c.* p. 264, fig. 3, *c*) which projects from the anterior aspect of the palmated portion of the horn any thing more than a mere rudiment; in some it is entirely absent. Instead of being subcylindrical, as was the case with the beam of the old type specimen, the beams of all the new specimens are very decidedly compressed anteriorly, forming, in the more adult, a sharp ridge from which are, not unfrequently, developed blunt rudimentary tines (*c'*, figs. 1, 2, 3, 4). In the finest horn sent by Mr. Robertson the upper third of the beam is furnished with eight strong tines, some of which are upwards of 7" in length (fig. 1 *d*); and even in the horns belonging to younger animals (figs. 2 & 3) these coronal tines

Fig. 3.

Left horn of *Cervus mesopotamicus* (about four years of age).

appear to be generally more numerous than was indicated by the old specimens.

These facts considered, the following diagnosis of the specific characters of the horns of *Cervus mesopotamicus* will, I think, be found more perfect than that given in my first notice of the species.

CERVUS MESOPOTAMICUS.

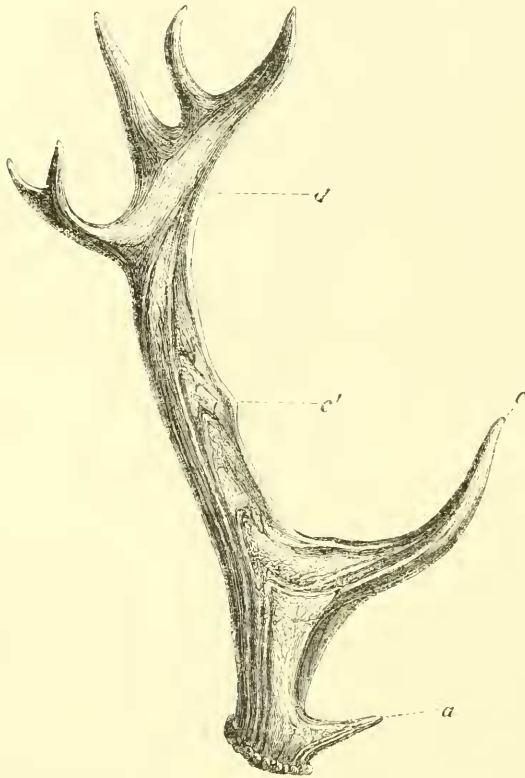
Horns, adult male.—Each horn supported on a short pedicle, its base surrounded by a massive well-developed burr, immediately above which a short straight brow-antler projects forwards and slightly upwards (*a*, figs. 1–4).

Expanding gradually from the burr, a more or less distinct fan-shaped palm is formed, from the anterior aspect of which are given off one or two laterally compressed, powerful tines (*c*, figs. 1–4, & *l. c.* figs. 2 & 3).

Above the palm the horn is contracted into a short beam rounded posteriorly, but with its anterior surface laterally compressed into a sharp ridge, from which blunt rudimentary tines are occasionally de-

veloped (*c'*, figs. 1-4). From the posterior surface of the upper third of the beam arises a row of long subcylindrical tines, from 3 to 8 in number, the bases of which, in very strongly developed specimens (fig. 1), are united so as to form a second palmature. The lower three fourths of the beam are bent in a decided curve outwards and slightly downwards, the upper fourth abruptly inwards and upwards.

Fig. 4.



Left horn of *Cervus mesopotamicus* (adult and of typical form).

From the following extract of a letter which I received from Mr. Robertson a short time since, it will be seen that I have been somewhat unfortunate in the name chosen for this species; as, however, the name *C. mesopotamicus* has been published, I believe I shall be taking the course least conducive to future confusion in adhering to it: Mr. Robertson writes:—

“I am very glad to see by your letter received some days ago, that the horns have enabled you to decide about the spotted deer. I fear,

however, that I did not clearly explain that this deer is met with in no part of Arabia, except in the jungles bordering the river Karoon and its tributary the Diz, both of which issue from the hitherto unexplored Luristan Hills. It does not exist in Mesopotamia or anywhere near the Euphrates; and the name *Cervus mesopotamicus* seems therefore to be a little misleading. I suspect, indeed, that this deer is really a native of the Luristan Hills, and that those I occasionally meet with on the Karoon are a few which wander down along it in the dry season. It is certain that there are more of them on the Karoon during the hot months than in winter. I have got a few horns from Luristan and some Gazelles' skulls from various parts of Arabia, which I shall send you by the first opportunity. Natives tell me the Luristan Hills abound in wild sheep and deer of various kinds. I should like much to visit them; but the inhabitants are predatory and fanatical, and if one wished, as I should, to leave the caravan-route, and explore the hills, a stronger party than I could conveniently muster would be necessary. I went twice to the Karoon last winter, but saw no deer on either occasion. Lions were plentiful, and other kinds of game consequently scarce, I hope to be more fortunate next season."

Busreh, May 30, 1875.

The table, which I here append, of some comparative cranial measurements of *Cervus mesopotamicus* and *Cervus dama** will, I trust, be of service in the determination of the species.

	<i>Cervus mesopotamicus.</i>		<i>Cervus dama.</i>	
	inches.	metre.	inches.	metre.
Greatest length of skull in a straight line	12.3	0.313	11.1	0.282
Distance from anterior rim of orbit to free extremity of the præmaxillæ	6.5	0.165	5.9	0.150
Distance from anterior extremity of nasals to free extremity of præmaxillæ	2.7	0.069	2.2	0.056
Width between the orbits.	4.6	0.117	4.1	0.104
Width of upper extremity of the nasals between the anteorbital vacuities	2.9	0.074	1.8	0.046
Distance from lower rim of orbit to maxillo-malar suture	1.15	0.028	.6	0.016
Distance from maxillo-malar suture to alveolus of posterior molar9	0.023	1.1	0.027
Extent of upper premolar series	1.55	0.039	1.35	0.034
Extent of upper molar series	2.1	0.053	1.9	0.048

* The measurements of *Cervus dama* are taken from an unusually large outlying Buck.